

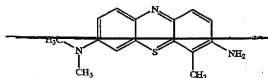
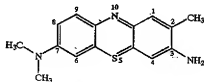
Amendments to the Claims:

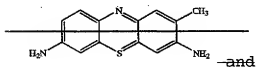
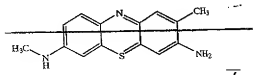
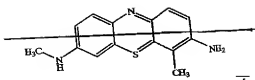
The following listing of claims will replace all prior versions and listings of claims in this application:

Listing of Claims:

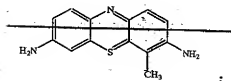
Claim 1. (Currently amended) A prognostic method for early prediction of eventual development of invasive epithelial cancer, said method comprising:

(a) applying to epithelial tissue having DNA a staining dye that is selectively retained by mitochondria of neoplastic and preneoplastic cells, wherein the dye includes ~~one or more compositions selected from the group consisting~~ consists of





-and

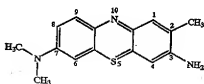


- (b) identifying clonal patches of said epithelial tissue by visually examining said tissue for stained tissue sites;
- (c) resecting epithelial tissue having said DNA in the locus of said clonal patches;
- (d) extracting said DNA from said resected epithelial tissue; and

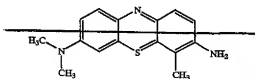
- (e) making said prognosis by determining whether DNA extracted from said resected epithelial tissue exhibits allelic losses or mutations of tumor suppressor genes, which losses or mutation are indicative that said resected tissue is in the progression pathway to development of invasive cancer.

Claim 2. (Currently amended) A method for determining the likelihood of cancer in epithelial tissue, the method comprising:

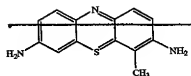
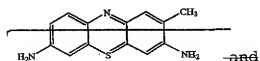
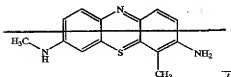
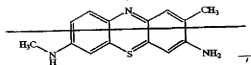
- (a) applying a dye that is retained by mitochondria of neoplastic and preneoplastic cells to the epithelial tissue, wherein the dye ~~includes one or more compositions selected from the group consisting~~ consists of



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; and

(b) subjecting the epithelial tissue that is stained with the dye to microsatellite analysis to determine whether the DNA from the stained epithelial tissue exhibits loss of heterozygosity (LOH) of at least one chromosome; wherein the LOH of at least one chromosome indicates a risk of the future progression to epithelial cancer.

Claim 3. (Previously presented) The method of Claim 2, wherein the microsatellite analysis is conducted at any one or a combination of the following chromosomes: 3p, 9p, and 17p.

Claim 4. (Previously presented) The method of Claim 3, wherein LOH of 3p and/or 9p indicates a 28-75% likelihood of the future progression to epithelial cancer.

Claim 5. (Previously presented) The method of Claim 3, wherein LOH of 3p, 9p, and 17p indicates a high likelihood of the future progression of epithelial cancer.